AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently amended) A device for combining a current image ~~(A)~~ of an object ~~(8)~~ and a map image ~~(B)~~ of the dwell region ~~(9)~~ of the object ~~(8)~~, containing a data-processing system ~~(5)~~ that is arranged

a) to estimate the position of the object ~~(8)~~ in relation to the map image ~~(B)~~, and

b) to combine the map image ~~(B)~~ around the estimated position of the object ~~(8)~~ with the current image ~~(A)~~, the estimated position of the object in the map image ~~(B)~~ being brought into register with the actual position of the object in the current image ~~(A)~~, ~~and~~ only a section ~~(7)~~ of the map image ~~(B) and/or of the current image (A)~~ being used.

2. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein the object ~~(8)~~ is located in a path network ~~(9)~~ and the map image ~~(B)~~ at least partially reproduces the path network ~~(9)~~.

3. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein the map image ~~(B)~~ contains additional information about the structures ~~and/or~~ or functions of the dwell region ~~(9)~~ of the object ~~(8)~~.

4. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein it contains a monitor ~~(10)~~ for displaying the combination of the current image ~~(A)~~ and the section ~~(7)~~ of the map image ~~(B)~~.

5. (Currently amended) A device as claimed in claim 1, ~~characterized in that it has~~ comprising a memory ~~(6)~~ for storing a number of map images ~~(B)~~, which are being categorized according to a varying state of the dwell region ~~(9)~~ of the object ~~(8)~~.

6. (Currently amended) A device as claimed in claim 1, ~~characterized in that it has~~ comprising a sensor device ~~(3)~~ for detecting at least one parameter that describes a varying state of the dwell region of the object ~~(8), preferably for detecting an electrocardiogram and/or of the respiratory cycle~~.

7. (Currently amended) A device as claimed in claim 5, ~~characterized in that~~ wherein the data-processing system ~~(5)~~ is arranged to select from the memory ~~(6)~~ a map image ~~(B)~~ whose associated state of the dwell region ~~(9)~~ of the object ~~(8)~~ is a best possible match for the state of the dwell region during the current image ~~(A)~~.

8. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein the data-processing system ~~(5)~~ is arranged to assign in the map image ~~(B)~~ to each pixel a probability that it belongs to a spatially-defined structure~~, such as a path network (9) for example~~.

9. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein the data-processing system ~~(5)~~ is arranged to produce a distance image ~~(D)~~ from the map image ~~(B)~~ by a distance transformation.

10. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~ wherein, in the section ~~(7)~~ of the map image being used, points not belonging to a spatially-defined structure~~, such as a path network (9) for example,~~ are transparent.

11. (Currently amended) A device as claimed in claim 1, ~~characterized in that it has~~ comprising an imaging means~~, especially an X-ray apparatus (4) and/or an NMR apparatus,~~ for producing the current image ~~(A) and optionally the map image (B)~~.

12. (Currently amended) A device for combined portrayal of a current image ~~(A)~~ of an object ~~(8)~~ that is located in a path network ~~(9)~~ and a map image ~~(B)~~ of the path network ~~(9)~~, containing a data-processing system ~~(5)~~ that is arranged

a) in the map image ~~(B)~~, to assign to each pixel a probability that it belongs to the path network ~~(9)~~;

b) to produce a distance image ~~(D)~~ from the map image ~~(B)~~ by a distance transformation;

c) by means of the distance image, ~~(D)~~ to estimate the position of the object ~~(8)~~ in relation to the map image ~~(B)~~ of the path network ~~(9)~~, and

d) to superimpose the map image, ~~(B)~~ wholly or in sections, on the current image ~~(A)~~ or a section thereof so that the estimated position of the object in the map image ~~(B)~~ is brought into register with the actual position of the object in the current image ~~(A)~~, only a section of the map image being used.

13. (Currently amended) A method for combining a current image ~~(A)~~ of an object ~~(8)~~ and a map image ~~(B)~~ of the dwell region of the object, containing the following steps:

a) ~~estimation of~~ estimating the position of the object ~~(8)~~ in relation to the map image ~~(B)~~;

b) ~~combination of~~ combining the map image ~~(B)~~ around the estimated position of the object with the current image ~~(A)~~, the estimated position of the object in the map image ~~(B)~~ being brought into register with the actual position of the object in the current image, ~~and~~ only a section ~~(7)~~ of the map image ~~(B) and/or of the current image (A)~~ being used.

14. (New) A device as claimed in claim 6, wherein the varying state comprises an electrocardiogram or respiratory cycle.

15. (New) A device as claimed in claim 8, wherein the spatially-defined structure comprises a path network.

16. (New) A device as claimed in claim 10, wherein the spatially-defined structure comprises a path network.

17. (New) A device as claimed in claim 11, wherein the imaging means comprise an X-ray apparatus or an NMR apparatus.

18. (New) A device as claimed in claim 1, wherein only a section of the current image is used.

19. (New) A method as claimed in claim 13, wherein in the step of combining the map image with the current image, only a section of the current image is used.